MONOPRICE

PRO AUDIO SERIES

16-Channel DMX-512 CONTROLLER

612120

USER'S MANUAL

1 INTRODUCTION

1.1 Package Contents

Please take an inventory of the package contents to ensure you have all the items listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

1x 16-Channel DMX-512 Controller
1x AC Power Adapter (DC 9-12V 500mA, 90V~240V)
1x User's Manual

1.2 Features

- Universal DMX-512 controller
- Controls 12 intelligent lights of up to 16 channels
- 30 banks of 8 scenes, 240 scenes total
- 6 sets of chases containing 240 scenes
- Execute multiple chases simultaneously
- Re-assignable channels
- Wheel assignable Pan/Tilt and 16-bit control
- Beat-activation, tap sync, auto run
- Grab any fixture on the fly
- Polarity selector
- MIDI compatible

1.3 Safety Guidelines

Please read these instructions carefully, with extra attention to the following Safety Guidelines. Keep these instructions handy for future reference.

- This product is intended for indoor use only!
- Do not expose this device to water or moisture of any kind. Do not place items with water or moisture on or near this device.
- Ensure that there is sufficient ventilation to allow the unit to cool. Do not block any ventilation vents or slots and ensure that there are no flammable materials or adjacent surfaces within 20 inches of this device.
- Ensure that the power outlet use to connect this device does not exceed the rated maximum voltage, listed on the back panel of the device.
- Do not allow the power cord to be crimped, pinched, stepped on, etc. Ensure that the power cord does not present a tripping hazard.
- Never unplug the unit by pulling on the power cord. Always grasp the connector head.
- Ensure that power is turned off and disconnected before making any electrical connections.
- Unplug the unit from the wall when it will go unused for a lengthy period of time.

- This device contains no user serviceable parts. Do not attempt to open, repair, or modify this device.
- Do not connect this device to a dimmer pack.
- In the event of serious operating problem, stop using the unit immediately.
- Do not operate this device in conditions in which the ambient temperature exceeds 113°F (45°C).

1.3 General Overview

The Monoprice 612120 DMX Controller is a universal intelligent lighting controller. It allows the control of up to 12 devices, with up to 16 channels each and up to 240 programmable scenes. Six chase banks can contain up to 240 steps composed of the saved scenes in any order. Programs can be triggered by music, MIDI, automatically, or manually. All chases can be executed at the same time.

You will find various programming tools, such as 8 universal channel sliders, a wheel, and LED display indicators for easier navigation of controls and menu functions. You can control the pan and tilt of different intelligent lighting fixtures using the same wheel at the same time by means of the wheel programming ability. This wheel allows the user to assign individual pan and tilt channels for each fixture.

1.4 Glossary of Terms

The following are common terms used in intelligent light programming.

Blackout is a state where the light output of all lighting fixtures is set to 0 or off, usually on a temporary basis.

Chases can also be called programs. A chase consists of a bunch of scenes stacked one after another.

DMX-512 is an industry standard digital communication protocol used in entertainment lighting equipment. For more information read Sections DMX Primer and DMX Control Mode in the Appendix.

Fade Slider is used to adjust the time between scenes within a chase.

Fixture refers to a lighting instrument or other device you can control, such as a fogger or dimmer.

MIDI is a standard for representing musical information in a digital format. A MIDI input would provide external triggering of scenes using a MIDI device, such as a MIDI keyboard.

Patching refers to the process of assigning fixtures to a DMX channel.

Programs are a collection of scenes stacked one after another. A program can consist of either a single scene or multiple scenes in sequence.

Scanner refers to a lighting instrument with a pan and tilt mirror.

Scenes are static lighting states.

Shutter is a mechanical device in the lighting fixture that allows you to block the light's path. It is often used to lessen the intensity of the light output and to strobe.

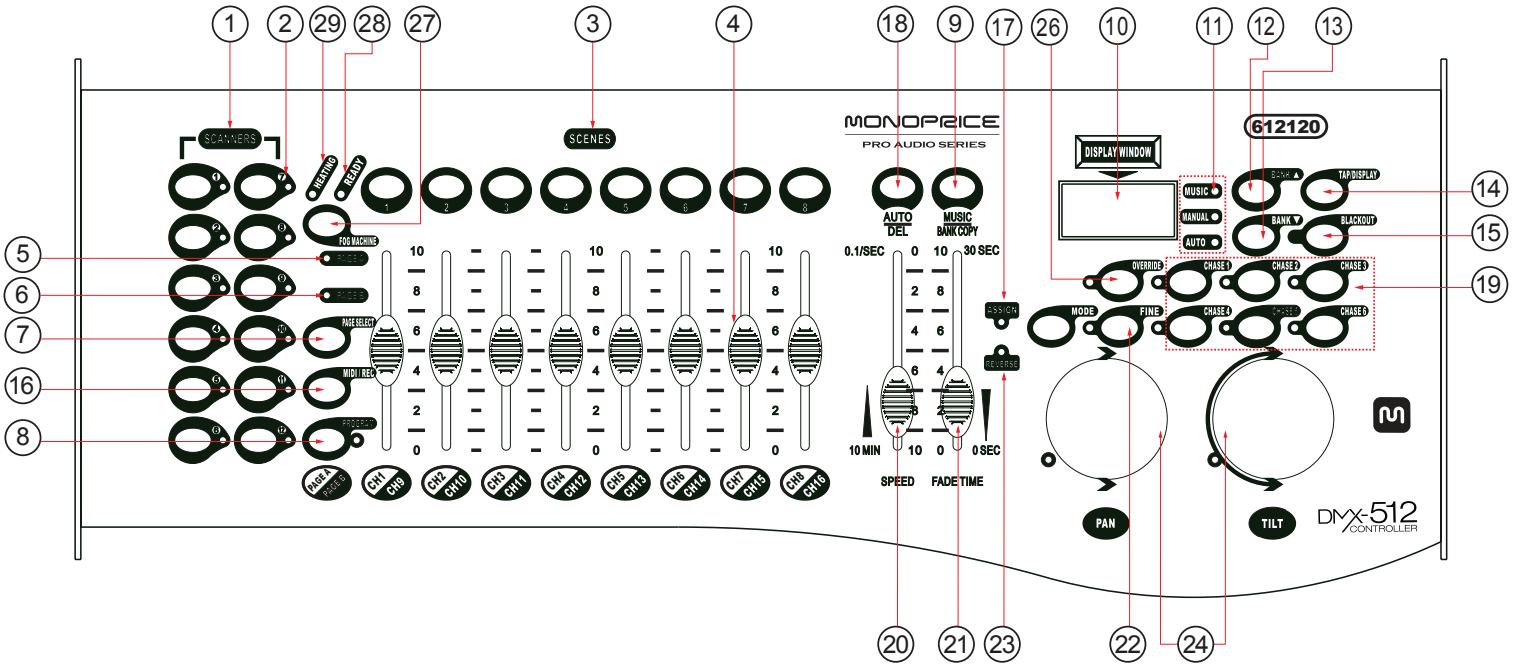
Sliders are also known as faders.

Speed Slider affects the amount of time a scene will hold its state. It is also considered a wait time.

Stand Alone refers to a fixture's ability to function independently of an external controller and usually in sync to music, due to a built in microphone.

2 CONTROLS AND CONNECTIONS

2.1 Top Panel



1. SCANNERS BUTTONS

Allows direct selection of the connected devices/fixtures.

2. SCANNERS LEDS

When lit, indicates that the corresponding device/fixture is selected.

3. SCENES BUTTONS

Universal bump buttons representing scene location for storage and selection.

4. CHANNEL FADERS

Allows adjustment of DMX values. Channels 1-8 are adjusted when the PAGE A LED is lit and Channels 9-16 are adjusted when the PAGE B LED is lit.

5. PAGE A LED

When illuminated, indicates that Channels 1-8 are available for adjustment.

6. PAGE B LED

When illuminated, indicates that Channels 9-16 are available for adjustment.

7. PAGE SELECT BUTTON

Press to cycle through the pages of control options. Page A, Page B, and Both Pages. The PAGE A and PAGE B LEDs illuminate to indicate the selected pages.

8. PROGRAM BUTTON

Press to toggle programming mode on/off. The LED illuminates when programming mode is active.

9. MUSIC/BANK COPY

When in programming mode, pressing this button issues the Copy command. Otherwise, pressing this button activates Music mode.

10. LCD DISPLAY WINDOWS

This status window displays pertinent operational data.

11. MODE INDICATOR LEDS

Indicates the operating mode status (Manual, Music, or Auto).

12. BANK UP BUTTON

Function button to traverse Scene/Steps in banks or chases. When the FINE button is active, pressing this button increases the DMX values.

13. BANK DOWN BUTTON

Function button to traverse Scene/Steps in banks or chases. When the FINE button is active, pressing this button decreases the DMX values.

14. TAP/DISPLAY BUTTON

During play, pressing this button produces a Tap-Sync. During programming pressing, this button changes the DMX value displayed in the LCD panel to percentage values.

15. BLACKOUT BUTTON

Sets the shutter or dimmer value of all fixtures to 0 causing all light output to cease.

16. MIDI/REC BUTTON
Activates MIDI external control and is used to confirm the record/save process.

17. ASSIGN LED
During initial setup, indicates that the controller is in Channel assign mode.

18. AUTO/DEL BUTTON
During programming, pressing this button deletes the current function. Otherwise, pressing this button activates Auto mode.

19. CHASE BUTTONS
These buttons allow direct access to Chase Memories 1 - 6.

20. SPEED FADER
This slider adjusts the hold or wait time of a scene or a step within a chase.

21. FADE TIME FADER
Also considered a cross-fader, this slider sets the time interval between two scenes in a chase.

22. FINE BUTTON
Activates 16-bit control of the wheel, resulting in movement being in extremely small increments. Additionally, while the FINE button is active, the Bank UP/DOWN buttons will increase and decrease the DMX values by one for either the wheel or the slider in focus or currently being moved.

23. REVERSE LED
Indicates that Reverse mode is active.

24. PAN/TILT WHEELS
Used to control the pan and tilt movements of a fixture.

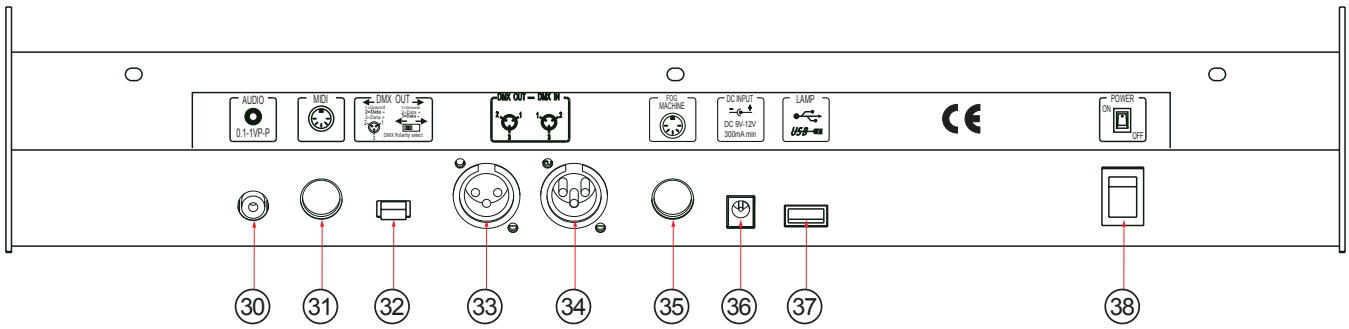
25. MODE BUTTON
This multifunction button is used for assigning pan/tilt wheels and channels.

26. OVERRIDE BUTTON
Used to override the fixture settings.

27. FOG MACHINE BUTTON
Pressing this button activates the connected fog machine.

28. FOG MACHINE READY INDICATOR
Indicates that the connected fog machine is heated up and ready to disperse fog/mist.

29. FOG MACHINE HEATING INDICATOR
Indicates that the fog machine is heating up.



30. AUDIO INPUT JACK
Direct audio feed for use in sound-active mode

31. MIDI INPUT PORT
The MIDI input is for external triggering of Banks and Chases using a MIDI device.

32. DMX POLARITY SWITCH
May be used to correct signal polarity.

33. DMX OUTPUT CONNECTOR
DMX control signal output to DMX devices and/or other controllers.

34. DMX INPUT CONNECTOR
Used to transfer programmed data between two controllers.

35. FOG MACHINE SOCKET
Plug a DMX fog machine into this socket.

36. DC INPUT JACK
DC power connector for use with the included AC adapter.

37. USB LAMP SOCKET
This USB power jack is intended for use with the included USB light. It is just for power and does not have a data connection of any kind.

38. POWER SWITCH
Turns the controller on and off.

3 OPERATING INSTRUCTIONS

3.1 Setup

3.1.1 SETTING UP THE SYSTEM

1. Using DMX cables, connect your intelligent lighting fixtures to the controller, as specified in the fixture manual(s).

2. Once everything is connected, plug the included AC adapter into the DC connector on the back panel. Plug the other end into a nearby AC power outlet.

3. Press the I side of the power rocker switch to turn power ON.

3.1.2 FIXTURE ADDRESSING

This controller is programmed to control 16 channels of DMX per fixture, therefore the fixtures you wish to control with the corresponding Scanner buttons on the unit, must be spaced 16 channels apart.

Please refer to your individual fixture's manual for DMX addressing instructions. The table above refers to a standard dipswitch binary configurable device.

Fixture or Scanner #	Default DMX Starting Address	Binary Dipswitch Settings (Switch to the ON Position)
1	1	1
2	17	1, 5
3	33	1, 6
4	49	1, 5, 6
5	65	1, 7
6	81	1, 5, 7
7	97	1, 6, 7
8	113	1, 5, 6, 7
9	129	1, 8
10	145	1, 5, 8
11	161	1, 6, 8
12	177	1, 5, 6, 8

3.1.3 WHEEL ASSIGNMENT

Because not all intelligent lighting fixtures are alike or share the same control attributes, the Monoprice 612120 DMX Controller allows you to assign to the wheel the correct pan and tilt channel for every individual fixture, including 16-bit channel assignments. It also allows you to reassign physical faders to fixture DMX channels so that you can combine or unify control of similar or the same attributes across different types of fixtures.

All wheels can be reassigned to output on a different DMX channel.

1 . Press and hold the PROGRAM button until the LED blinks.

2. Simultaneously press the FINE and MODE buttons, release them, then press them again a second time to access the Channel Assignment mode. The Assign LED will illuminate in response. The wheel can be reassigned to output on a different DMX channel.

   Note: Simultaneously press the AUTO/DEL *and* MODE *buttons to delete the channel assignment mode.*

3. Press a SCANNER button that represents the fixture for which you would like to set the pan & tilt.

4. Use the BANK UP and BANK DOWN buttons to select pan/tilt.

5. Press the TAP/DISPLAY button to switch pages.

Note: You can reassign the DMX channel to all controller fader channels.

6. Press and hold the MODE button, then press the SCENES buttons to select the DMX channel. All LEDs will blink.

7. Press and hold the FINE & MODE buttons to exit.

3.1.4 REVERSE REVIEW

1. Simultaneously press the FINE and MODE buttons to access wheel assignment mode

2. Press a SCANNER button to select a scanner.

3. Simultaneously press the FINE and MODE buttons, release them, then press them again a second time to exit

3.1.5. WHEEL ASSIGNMENT REVIEW

1. Simultaneously press the FINE and MODE buttons, release them, then press them again a second time to access the Channel Reverse mode.

2. Press a SCANNER button to select a scanner.

3. Simultaneously press the FINE and MODE buttons to exit.

3.1.6 COPY SCANNER

To save time, you can copy the settings from one Scanner to that of another. In this example, we will review how to copy Scanner 1 to Scanner 2.

1. Press and hold the SCANNER 1 button.
2. While holding the SCANNER 1 button, press and hold the SCANNER2 button.
3. While holding the SCANNER 2 button down, release the SCANNER 1 button.
4. Release the SCANNER 2 button. All SCANNER LED indicators will flash to confirm the successful copy.

3.1.7 REVERSE CHANNEL OUTPUT

You can permanently reverse the output of any given channel on the controller.

1. Press and hold the PROGRAM button until the LED blinks.
2. Simultaneously press the FINE and MODE buttons to access the channel assignment mode, then press the SCANNER button.

   Note: Simultaneously press the AUTO/DEL *and* MODE *buttons to delete the reverse channel.*
3. Use the BANK UP and BANK DOWN buttons to select pan/tilt.
4. Press the TAP/DISPLAY button to switch between pages.
5. Press and hold MODE button, then press the SCENES buttons to select the DMX channel. All LEDs will blink.
6. Simultaneously press and hold the FINE and MODE buttons, release them, then press them again a second time to exit

3.1.8 FADE TIME ASSIGN

You can choose whether the board's fade time during scene execution is implemented globally, to all output channels, or only to the Pan & Tilt movement channels. This is relevant because often you will want gobos and colors to change quickly, while not affecting the movement of the light.

1. Turn OFF the controller.
2. Simultaneously hold the MODE and TAP/DISPLAY buttons.
3. While still holding the buttons, turn the controller ON.
4. Press the TAP/DISPLAY button to toggle between the two modes. You can select either ALL CH, which applies to all channels, or ONLY X/Y, which applies to pan & tilt only.
5. Press and hold the MODE button then press the TAP/DISPLAY button to save the settings. All LEDs will blink to confirm.

3.2 Operation

3.2.1 MANUAL MODE

Manual mode allows direct control of all scanners. You are able to move them and change attributes by using the channel faders and wheel. Note that all changes made while in Manual made are temporary and will not be recorded.

1. Press the AUTO/DEL button repeatedly until the MANUAL LED illuminates.

2. Press a SCANNER button to select that Scanner.

3. Move the wheel and faders to manually change fixture attributes.

4. Use the PAGE SELECT button to switch between fader control of Channels 1-8 and fader control of Channels 9-16.

5. Press the TAP/DISPLAY button to toggle the LCD display between DMX values (0-255) and percentages (0-100).

3.2.2 REVIEW SCENE OR CHASE

This instruction assumes that you have already recorded Scenes and Chases on the controller. Otherwise, skip this section and go to section 3.3 Programming.

1. If the controller is not in Manual mode, enable Manual mode by following the instruction in section 3.2.1.

2. Use the BANK UP and BANK DOWN buttons to select one of the 30 Banks.

3. Select a SCENE button corresponding to the Scene you want to review.

4. Move the wheels and faders to change fixture attributes.

3.2.3 REVIEW SCENE OR CHASE

This instruction assumes that you have already recorded Scenes and Chases on the controller. Otherwise, skip this section and go to Programming.

1. If the controller is not in Manual mode, enable Manual mode by following the instruction in section 3.2.1.

2. Press one of the six CHASE buttons.

3. Press the TAP/DISPLAY button to view the step number on the display.

4. Press the BANK UP and BANK DOWN buttons to review all scenes in the Chase.

3.3 Programming

A Program (Bank) is a sequence of different Scenes (or steps), that will be performed one after another. Programs can consist of up to 8 Scenes each.

3.3.1 ENTERING PROGRAM MODE

1. Press the PROGRAM button repeatedly until the LED blinks.

3.3.2 CREATE A SCENE

A scene is a static lighting state. Scenes are stored in banks. There are 30 bank memories on the controller and each bank can hold 8 scene memories. The controller can save 240 scenes total.

1. Press the PROGRAM button repeatedly until the LED blinks.

   Note: If the Blackout LED is illuminated, press the BLACKOUT button to deselect it.

2. Position the SPEED and FADE TIME sliders all the way down.

3. Select the SCANNERS you wish to include in your scene.

   Note: You can select more than one fixture.

4. Compose the Scene by moving the sliders and wheel.

   Note: You can access Channels 9-16 by pressing the PAGE SELECT *button. This is necessary for fixtures that use more than 8 channels of control.*

5. Tap the MIDI/REC button.

6. Choose a BANK (01~30) to change, if necessary.

   Note: There are 8 scenes available in every Bank.

7. Select a SCENES button to store.

Note: All LEDs will flash to confirm. The LCD display will now indicate the Scene number and Bank number in use.

8. Repeat steps 3 through 7 as necessary. Up to 8 scenes can be recorded in a Program

9. To exit Program mode, hold the PROGRAM button.

   Tip! Press the FINE *button, activate the wheel or slider by moving it, then use the* BANK UP *and* BANK DOWN buttons to change the values in increments of 1.

3.3.3 RUNNING A PROGRAM

1. Use BANK UP and BANK DOWN buttons to change Program banks, as necessary.
   Note: If the Blackout LED is illuminated, press the BLACKOUT button to deselect it.
2. Press the AUTO/DEL button repeatedly until the AUTO LED turns on.
3. Adjust the Program speed via the SPEED fader and the loop rate via the FADE TIME fader.
4. Alternatively, you can tap the TAP/DISPLAY button twice. The time between the two taps will become the time between SCENES (up to 10 minutes). This is also called "Tap-Sync".

3.3.4 CHECK PROGRAM

1. Press and hold the PROGRAM button until the LED blinks.
2. Use the BANK UP and BANK DOWN buttons to select the Program bank to review.
3. Press the SCENES buttons to individually review each scene.

3.3.5 EDITING A PROGRAM

Scenes will need to be modified manually.

1. Press and hold the PROGRAM button until the LED blinks.
   Note: If the Blackout LED is illuminated, press the BLACKOUT button to deselect it.
2. Use the BANK UP and BANK DOWN buttons to change Program banks if necessary.
3. Use the SCANNERS buttons to select the desired fixture.
4. Adjust and change fixture attributes using the channel faders and wheels.
5. Press the MIDI/REC button to prepare the save.
6. Select the desired SCENES button to save.

3.3.6 COPY A PROGRAM

1. Press and hold the PROGRAM button until the LED blinks.
2. Use the BANK UP and BANK DOWN buttons to select the Program bank you will copy.
   Note that the all scenes in the Program bank (up to 8) will be copied.
3. Press the MIDI/REC button to prepare the copy.
4. Use the BANK UP and BANK DOWN buttons to select the destination Program bank.
5. Press the MUSIC BANK COPY button to execute the copy. All LEDs on the controller will blink to confirm.

3.4 Chase Programming

A chase is created by using previously created scenes. Scenes become steps in a chase and can be arranged in any order you choose. It is highly recommended that, prior to programming chases for the first time; you delete all chases from memory. See 3.4.9 Delete All Chase Programs for instructions.

3.4.1 CREATE A CHASE

A Chase can contain up to 240 scenes as steps. The term steps and scenes are used interchangeably.

1. Press the PROGRAM button until the LED blinks.
2. Press the CHASE button you wish to program.
3. Change the BANK as necessary to locate a Scene.
4. Select the SCENE to insert.
5. Tap the MIDI/REC button to store the Scene.
6. Repeat steps 3 through 5 to add additional steps in the Chase. Up to 240 steps can be recorded.
7. Press and hold the PROGRAM button to save the Chase.

3.4.2 RUNNING A CHASE

1. Press a CHASE button then press the AUTO/DEL button.
2. Adjust the Chase speed by tapping the TAP/DISPLAY button, waiting the desired delay period, then tapping the TAP/DISPLAY button again a second time. The time interval between the two taps will become the Chase Speed (up to 10 minutes).

3.4.3 CHECKING A CHASE

1. Press and hold the PROGRAM button until the LED illuminates.
2. Select the desired CHASE button.
3. Press the TAP/DISPLAY button to switch the LCD display to steps.
4. Review each scene/step individually by using the BANK UP and BANK DOWN buttons.

3.4.4 COPY BANK INTO CHASE

1. Press and hold the PROGRAM button to enter Programming mode.
2. Press the desired CHASE button.
3. Use the BANK UP and BANK DOWN buttons to select the BANK to be copied.
4. Press MUSIC/BANK COPY button to prepare the copy.
5. Press the MIDI/REC button to copy the bank. All LEDs will blink to confirm.

3.4.5 COPY SCENE INTO CHASE

1. Press and hold the PROGRAM button to enter Programming mode.
2. Press the desired CHASE button.
3. Use the BANK UP and BANK DOWN buttons to select the BANK that contains the scene to be copied.
4. Press the SCENE button that corresponds to the scene to be copied.
5. Press the MIDI/REC button to copy the scene. All LEDs will blink to confirm.

3.4.6 INSERT SCENE INTO A CHASE

1. Press and hold the PROGRAM button to enter Programming mode.
2. Press the desired CHASE button.
3. Press the TAP/DISPLAY to switch the LCD display to steps view.
4. Use the BANK UP and BANK DOWN buttons to navigate steps and locate the insert point of the new scene. The display will show the step number after which the scene will be inserted.

   Example: If inserting a scene between Steps 5 and 6, the display should show STEP05.
5. Press the MIDI/REC button to prepare the insert.
6. Use the BANK UP and BANK DOWN buttons to locate the SCENE.
7. Press the SCENE button that corresponds to the scene to be inserted.
8. Press the MIDI/REC button to insert the scene. All LEDs will blink to confirm.

3.4.7 DELETE A SCENE IN A CHASE

1. Press and hold the PROGRAM button to enter Programming mode.
2. Press the desired CHASE button that contains the scene to be deleted.
3. Press the TAP/DISPLAY button to switch the LCD display to steps.
4. Use the BANK UP and BANK DOWN buttons to select the scene/step to be deleted.
5. Press AUTO/DEL button to delete the step/scene. All LEDs will blink to confirm.

3.4.8 DELETE A CHASE

1. Press and hold the PROGRAM button to enter Programming mode.
2. Press the CHASE button to be deleted.
3. Simultaneously press the AUTO/DEL button and the CHASE button from the previous step to delete the chase. All LEDs will blink to confirm.

3.4.9 DELETE ALL CHASE PROGRAMS

WARNING! This procedure will result in the irrevocable loss of all chase step memory. However, the individual scenes and program banks will be preserved.

1. Turn the controller OFF.
2. Simultaneously press and hold the BANK DOWN and the AUTO/DEL buttons. While holding these buttons down, turn the controller ON.
3. All LEDs will blink to confirm.

3.5 Scene Programming (Steps)

3.5.1 INSERT A SCENE

1. Press and hold the PROGRAM button to enter Programming mode.
2. Press the desired CHASE button.
3. Press the TAP/DISPLAY button to switch the LCD display to steps view.
4. Use the BANK UP and BANK DOWN buttons to navigate steps and locate the insert point of the new scene. The display will show the step number after which the scene will be inserted.

   Example: If inserting a scene between Steps 5 and 6, the display should show STEP05.
5. Press the MIDI/REC button to prepare the insert.
6. Use the BANK UP and BANK DOWN buttons to locate the Scene.
7. Press the SCENE button that corresponds to the scene to be inserted.
8. Press the MIDI/REC button to insert the scene. All LEDs will blink to confirm.

3.5.2 COPY A SCENE

1. Press and hold the PROGRAM button to enter Programming mode.
2. Use the BANK UP and BANK DOWN buttons to select the Bank that contains the scene to be copied.
3. Press the SCENE button that corresponds to the scene to be copied.
4. Press the MIDI/REC button to copy the scene.
5. Use the BANK UP and BANK DOWN buttons to select the BANK destination that contains the scene memory to record to.
6. Press the desired SCENE button to complete the copy. All LEDs will blink to confirm.

3.5.3 DELETE A SCENE

Note: When deleting a scene the physical location is not removed, however, all 192 DMX channels available to the scene will be set to value 0.

1. Press and hold the PROGRAM button to enter Programming mode.
2. Use the BANK UP and BANK DOWN buttons to select the BANK that contains the scene to be deleted.
3. Press the AUTO/DEL button.
4. Press the SCENE button that corresponds to the scene you want to delete. All LEDs will blink to confirm.

3.5.4 DELETE ALL SCENES

WARNING! This process is irreversible! All scenes with data will be set to 0.

1. Press and hold the PROGRAM button and the BANK DOWN button. While holding the buttons down, turn the controller OFF.
2. Turn the controller back ON.

3.6 Playback

3.6.1 RUNNING IN SOUND-MODE

In Sound mode, programs will be triggered by sound, using the controller's built-in microphone.

1. Press the MUSIC BANK COPY button repeatedly until the MUSIC LED turns on.
2. Use the BANK UP and BANK DOWN buttons to select the program BANK to run in sound active mode.

3. Alternatively you can press a single CHASE button or several CHASE buttons in sequence and all selected chases will loop in the order selected.

Note: Multiple selected chases will loop and run in the order originally selected.

4. Use the FADE TIMER to adjust the duration time.

3.6.2 RUNNING IN AUTO-MODE

Note: In Auto mode, programs will be triggered by the controller's FADE TIME *and* SPEED *fader settings.*

1. Press the AUTO/DEL button repeatedly until the AUTO LED turns on.

2. If a CHASE button is not pressed, the controller will automatically run a BANK program.

3. Use the BANK UP and BANK DOWN buttons to change the BANK programs.

4. Alternatively you can press a single CHASE button or several CHASE buttons in sequence. All selected chases will loop in the order selected.

5. You can adjust the time between steps by moving the SPEED fader and the duration of the step by moving FADE TIME the fader.

3.6.3 RUN MULTIPLE CHASES SIMULTANEOUSLY

IMPORTANT! To avoid conflict between scenes running simultaneously that control the same fixture attributes, consider creating individual color and gobo chases.

1. Press and hold the AUTO/DEL button.

2. While holding down the AUTO/DEL button, press and release each CHASE you want to run simultaneously.

3.6.4 BLACKOUT

Press the BLACKOUT button to set the lighting output of all fixtures to 0 or OFF.

3.7 MIDI Input Operation

The controller will only respond to MIDI commands on the MIDI channel to which it is set. All MIDI control is performed using "Note On" commands. All other MIDI instructions are ignored. To stop a chase, send the BLACKOUT note (MIDI Note 126, see table below).

1. Press and hold the MIDI/REC button for about 3 seconds.
2. Use the BANK UP and BANK DOWN buttons to select the MIDI control channel (1-16).
   Note: This is the Channel on which the controller will receive MIDI "Note On" commands.
3. Press and hold the MIDI/REC button for 3 seconds to save the settings.
4. To release MIDI control, repeat the above process, but press any other button except the BANK buttons in Step 2.

MIDI Note	Function	MIDI Note	Function
00 to 07	Scenes 1-8 in BANK 1	88 to 95	Scenes 1-8 in BANK 12
08 to 15	Scenes 1-8 in BANK 2	95 to 103	Scenes 1-8 in BANK 13
16 to 23	Scenes 1-8 in BANK 3	104 to 111	Scenes 1-8 in BANK 14
24 to 31	Scenes 1-8 in BANK 4	112 to 119	Scenes 1-8 in BANK 15
32 to 39	Scenes 1-8 in BANK 5	120	Chase 1
40 to 47	Scenes 1-8 in BANK 6	121	Chase 2
48 to 55	Scenes 1-8 in BANK 7	122	Chase 3
56 to 63	Scenes 1-8 in BANK 8	123	Chase 4
64 to 71	Scenes 1-8 in BANK 9	124	Chase 5
72 to 79	Scenes 1-8 in BANK 10	125	Chase 6
80 to 87	Scenes 1-8 in BANK 11	126	BLACKOUT

3.8 Data Transfer

It is possible to transfer the programs stored in one Monoprice 612120 DMX Controller to another by performing the following steps:

1. Use a DMX cable to connect the output of the source controller to the input of the destination controller.
2. Turn the source controller OFF. Press and hold down the SCANNER 2, SCANNER 3, and SCENE 1 buttons. While holding down the buttons, turn the controller ON. The LCD display will show TRANSMIT, indicating that it is ready to transmit data.
3. Turn the destination controller OFF. Press and hold down the SCANNER 8, SCANNER 9, and SCENE 2 buttons. While holding down the buttons, turn the controller ON. The LCD display will show RECEIVE, indicating that it is ready to receive data.
4. Both units are now ready to transmit and receive. Simultaneously press the SCENE 7 and SCENE 8 buttons on the source controller to begin the transmission.

4 APPENDIX

4.1 DMX Primer

There are 512 channels in a DMX-512 connection. Channels may be assigned in any manner. A fixture capable of receiving DMX 512 will require either one channel or a number of sequential channels. The user must assign a starting address on the fixture that indicates the first channel reserved in the controller.

There are many different types of DMX controllable fixtures and they all may vary in the total number of channels required. Choosing a start address should be planned in advance. Channels should never overlap. If they do, this will result in erratic operation of the fixtures whose starting address is set incorrectly. You can however, control multiple fixtures of the same type using the same starting address as long as the intended result is that of unison in movement or operation. In other words, the fixtures will be slaved together and will all respond exactly the same.

DMX fixtures are designed to receive data through a serial Daisy Chain. A Daisy Chain connection is one in which the DATA OUT of one fixture connects to the DATA IN of the next fixture. The order in which the fixtures are connected is not important and has no effect on how a controller communicates to each fixture. Use an order that provides for the easiest and most direct cabling. Connect fixtures using shielded two conductor twisted pair cable with three pin XLR male to female connectors. The shield connection is pin 1, while pin 2 is Data Negative (S-) and pin 3 is Data positive (S+).

4.2 DMX Termination

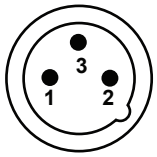
The output of the last fixture in the daisy chain must be terminated with a DMX Terminator. To make a DMX terminator, solder a 120-ohm resistor between pins 2 and 3 of an XLR connector. Plug the DMX Terminator into the output of the last fixture in the daisy chain.

Occupation of theXLR-connection:

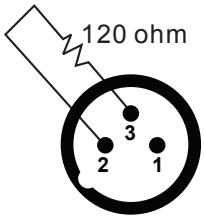
DMX-OUTPUT
XLRmounting-socket:

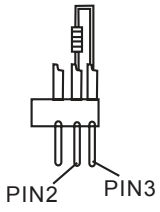
1. Ground
2. Signal(-)
3. Signal(+)

DMX-OUTPUT
XLRmounting-plug:

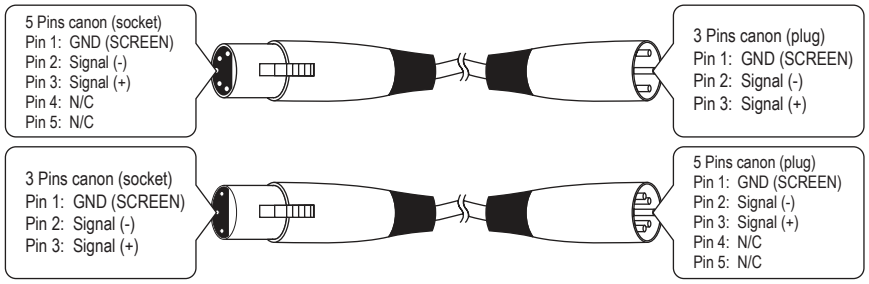


1. Ground
2. Signal(-)
3. Signal(+)

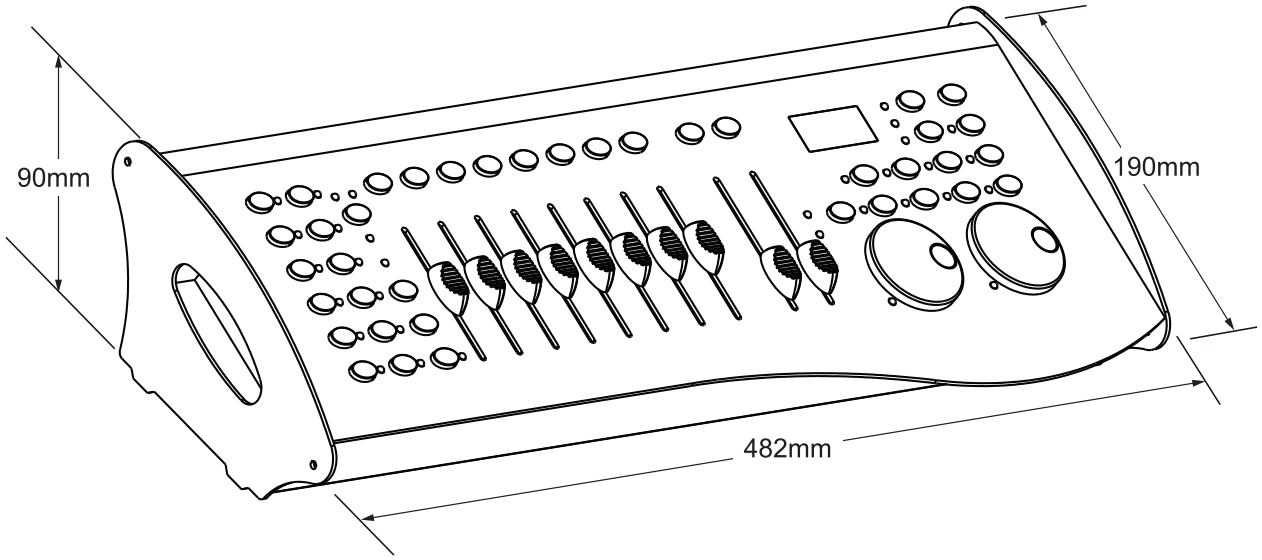




Note that some DMX fixtures use a 5-pin XLR-type connector instead of a standard 3-pin XLR connector. You can make a 3-pin to 5-pin cable by wiring the cable using the pin connections listed below.



4.3 Specifications



Dimensions (W x D x H)	19.0" x 7.5" x 3.5" (482 x 190 x 90 mm)
Weight	7.7 lbs. (3.5 Kg)
Input Voltage	DC 9V-12V 500mA min
Maximum Ambient Temperature	+113°F (+45°C)
Data Input	locking 3-pin XLR male socket
Data Output	locking 3-pin XLR female socket
Data Pin Configuration	pin 1 shield, pin 2 (-), pin 3 (+)
Protocols	DMX-512 USITT

4.4 DMX Dipswitch Quick Reference Chart

DMX ADDRESS QUICK REFERENCE CHART																						
DIP SWITCH POSITION																						
DMX DIP SWITCH SET 0=OFF 1=ON X=OFF or ON					#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	
					#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1	
					#7	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	
					#6	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	
#1	#2	#3	#4	#5																		
0	0	0	0	0			32	64	96	128	160	192	224	256	288	320	352	384	416	448	480	
1	0	0	0	0		1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481	
0	1	0	0	0		2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482	
1	1	0	0	0		3	35	67	99	131	163	195	227	259	291	323	355	387	419	451	483	
0	0	1	0	0		4	36	68	100	132	164	196	228	260	292	324	356	388	420	452	484	
1	0	1	0	0		5	37	69	101	133	165	197	229	261	293	325	357	389	421	453	485	
0	1	1	0	0		6	38	70	102	134	166	198	230	262	294	326	358	390	422	454	486	
1	1	1	0	0		7	39	71	103	135	167	199	231	263	295	327	359	391	423	455	487	
0	0	0	1	0		8	40	72	104	136	168	200	232	264	296	328	360	392	424	456	488	
1	0	0	1	0		9	41	73	105	137	169	201	233	265	297	329	361	393	425	457	489	
0	1	0	1	0		10	42	74	106	138	170	202	234	266	298	330	362	394	426	458	490	
1	1	0	1	0		11	43	75	107	139	171	203	235	267	299	331	363	395	427	459	491	
0	0	1	1	0		12	44	76	108	140	172	204	236	268	300	332	364	396	428	460	492	
1	0	1	1	0		13	45	77	109	141	173	205	237	269	301	333	365	397	429	461	493	
0	1	1	1	0		14	46	78	110	142	174	206	238	270	302	334	366	398	430	462	494	
1	1	1	1	0		15	47	79	111	143	175	207	239	271	303	335	367	399	431	463	495	
0	0	0	0	1		16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496	
1	0	0	0	1		17	49	81	113	145	177	209	241	273	305	337	369	401	433	465	497	
0	1	0	0	1		18	50	82	114	146	178	210	242	274	306	338	370	402	434	466	498	
1	1	0	0	1		19	51	83	115	147	179	211	243	275	307	339	371	403	435	467	499	
0	0	1	0	1		20	52	84	116	148	180	212	244	276	308	340	372	404	436	468	500	
1	0	1	0	1		21	53	85	117	149	181	213	245	277	309	341	373	405	437	469	501	
0	1	1	0	1		22	54	86	118	150	182	214	246	278	310	342	374	406	438	470	502	
1	1	1	0	1		23	55	87	119	151	183	215	247	279	311	343	375	407	439	471	503	
0	0	0	1	1		24	56	88	120	152	184	216	248	280	312	344	376	408	440	472	504	
1	0	0	1	1		25	57	89	121	153	185	217	249	281	313	345	377	409	441	473	505	
0	1	0	1	1		26	58	90	122	154	186	218	250	282	314	346	378	410	442	474	506	
1	1	0	1	1		27	59	91	123	155	187	219	251	283	315	347	379	411	443	475	507	
0	0	1	1	1		28	60	92	124	156	188	220	252	284	316	348	380	412	444	476	508	
1	0	1	1	1		29	61	93	125	157	189	221	253	285	317	349	381	413	445	477	509	
0	1	1	1	1		30	62	94	126	158	190	222	254	286	318	350	382	414	446	478	510	
1	1	1	1	1		31	63	95	127	159	191	223	255	287	319	351	383	415	447	479	511	

Dip Switch Position

DMX Address